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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,400	08/11/2000	Venkataraman Ramanathan	204861	7300

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EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT PAPER NUMBER

2157

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/637,400

Applicant(s)

RAMANATHAN ET AL.

Examiner

Hussein A El-chanti

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. This action is responsive to communication received on Jan. 26, 2004. Claims 1-23 are pending examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Recio et al (U.S. 6,035,418) in view of Coile et al (U.S. 6,298,380).

As to claims 1, 11, and 18, Recio et al discloses a system and method for improving resource utilization in a TCP/IP connection management system that teaches:

- closing a TCP/IP connection to create a timed-wait state (column 2, lines 38 46, lines 53-59).

- releasing of memory containing the information required to service the client connection (column 2, lines 46-47). Sending the TCB back to the web server is equivalent to releasing memory containing information about the connection.

Recio et al does not teach excluding information from the TCB not required to identify the client connection. Coile et al discloses a method and apparatus for reducing overhead on a proxied connection that teaches excluding information from the TCB not

required to identify the client connection (column 3 line 67- column 4 line 8). The smaller connection object that Coile et al refers to is equivalent to the smaller TCB described in the invention.

It would have been obvious to one of ordinary skill in the art to implement Coile et al's smaller connection object in creating a time-wait TCB as described by Recio et al. The motivation to do so would be to have less memory overhead during data transfer.

As to claims 2, 12, and 19 Coile et al further teaches the step of excluding comprises the step of copying the information required to identify the client connection to form the TWTCB (column 9, lines 5-22). In order to maintain the smaller connection object, the information must be copied from somewhere.

It would have been obvious to one of ordinary skill in the art to implement Coile et al's smaller connection object in creating a time-wait TCB as described by Recio et al. The motivation to do so would be to have less memory overhead during data transfer.

As to claim 3 and 20, Recio et al further teaches releasing the memory includes the step of releasing the TCB required to identify the client connection (column 2, lines 46-47).

As to claim 4, Recio et al further teaches maintaining a minimum of information necessary to avoid late-routed packets forming new connections on the server (column 2, lines 53-56).

As to claims 5-10, 13-16 and 21-23, Coile et al further teaches excluding information not required to identify the client connection comprises the step of forming a TWTCB that occupies less memory than the, TCB (column 9, lines 5-12). The smaller

connection object described by Coile et al is equivalent to the TIMED WAIT transmission control blocks described by the claims, and could be coded as described by claims 5, 6, 15, 16, 22, or 23 by anyone of ordinary skill in the art. These coded structures yield the smaller sized TWTCBs claimed in claims 8, 9, 10, 13, 14, and 21, as described in the specification. Therefore, these TWTCBs fall within the scope of Coile et al's smaller connection object.

It would have been obvious to one of ordinary skill in the art to implement Coile et al's smaller connection object in creating a time-wait TCB as described by Recio et al. The motivation to do so would be to have less memory overhead during data transfer.

3. Claim 17 does not teach or define any additional limitation over claims 1-16 and therefore is rejected for similar reasons.

4. Applicant's arguments filed have been fully considered but they are not persuasive.

In the remarks, the applicant argues in substance that; A) One of the ordinary skill in the art would not be motivated to maintain a connection object when the status flag is set off B) there is no reason to combine the teachings of Recio and Coile since Recio teaches freeing of resources in the TCB once the TCP/IP connection is terminated and Coile teaches checking packets without requiring the proxy to terminate the connection C) Coile identifies "the sequence synchronization factors" which is not required to identify the client connection D) Coile and Recio do not teach the limitations of claims 5, 6, 15, 16, 22 and 23.

In response to A) and B) In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Recio teaches a method for disabling TCP connections and maintaining information regarding the connection for an amount of time (see col. 2 lines 38-51) where the information is maintained if a flag is set. Recio is modified with the teachings of Coile when the flag is set where one of ordinary skill in the art would modify Recio by maintaining only the data that is required to reestablish the closed communication. Coile teaches preserving smaller TCB connection objects that are sufficient to reestablish a connection between two communication devices. Since Recio and Coile teach preserving information to establish communication it would have been obvious for one of ordinary skill in the art to combine the two references.

In response to C) Coile teaches sequence synchronization factors where the system keeps record of the acknowledged and unacknowledged packets. The sequence synchronization factors can be used to determine where to start the communication by requesting only the unacknowledged packets. There is no limitation on the information used to identify the client connection and therefore Coile meets the

scope of the claimed limitation "information from the TCB not required to identify the client connection".

In response to D) the code of claim 5, 6, 15, 16, 22 and 23 defines a source and destination IP address, source and destination port address. Coile teaches identifying source and destination IP address, source and destination port address (see fig. 9 and col. 16-col. 17) and therefore the combination of Coile and Recio meets the scope of the limitations of claims 5, 6, 15, 16, 22 and 23.

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

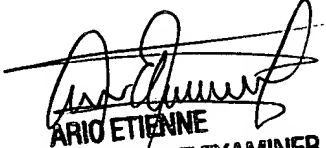
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (703)305-4652. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

April 19, 2004


ARIO ETIENNE
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